

[54] **COMPOSITION USED FOR THE DETERMINATION OF BETA-HYDROXYBUTYRIC ACID AND A METHOD FOR PREPARING THE SAID COMPOSITION**

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[58] Field of Search 422/57; 435/26, 805, 435/25; 427/2

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[57] ABSTRACT

This invention relates to a composition for determining β -hydroxybutyric acid, usable for doctors, nurses, and patients themselves simply and quickly without use of special instruments, and also relates to a method for preparing the said composition.

The composition of the invention oxidizes β -hydroxybutyric acid under alkaline conditions and the presence of nicotineamide adenine dinucleotide (NAD) by β -hydroxybutyric acid dehydrogenase, and the produced reduction-type NAD (NADH) reduces tetrazolium salt through an electron carrier to produce formazan developing color. The composition permits accurate measurement quickly and simply, and has excellent conservative stability, because it is a uniform solid-phase composition prepared by applying reagents necessary for the reaction of film impermeable to water together with a natural or synthesized film forming polymer. The invention further provides a method for preparing the said composition by applying, on a supporter impermeable to water, W/O emulsion which is formed by dispersing alkaline buffer, β -hydroxybutyric acid dehydrogenase, NAD, electron carrier, and tetrazolium salt in an organic solvent insoluble in water together with a natural or synthesized film forming polymer.

3 Claims, 2 Drawing Sheets